

WHAT IS CLAIMED IS:

5 1. A building panel comprising at least two panel domains, wherein each panel domain has an essentially homogeneous compressive strength and an average compressive strength; wherein said panel:

(a) has at least two panel domains having different average compressive strengths;

(b) is essentially free of a combination of hollow and solid foam strands;

10 and wherein, if said panel has at least two adjacent panel domains containing fibrous material with a fiber orientation, the fiber orientation of one panel domain is non-orthogonal to the fiber orientation of at least one adjacent panel domain.

15 2. The panel of Claim 1, wherein at least two domains differ in average compressive strength by at least 5%.

3. The panel of Claim 1, wherein at least one panel domain is a conformable panel domain that, when compressed, reduces at least one dimension of the panel thereby allowing
20 insertion of the panel into a cavity; wherein the panel also has a compressive recovery that causes frictional retention of the panel within the cavity.

4. The panel of Claim 1, wherein at least one panel domain is a conformable panel domain that allows the panel to
25 reversibly bend from a planar to a non-planar configuration.

5. The panel of Claim 1, wherein the panel has a primary face, a face opposing the primary face, a panel thickness, and a slit penetrating to a depth less than the panel thickness traverses the primary face or the face
30 opposing the primary face.

6. The panel of Claim 1, wherein the panel has alternating conformable and rigid panel domains.

7. The panel of Claim 1, wherein the panel has a perimeter and said perimeter comprises at least one conformable panel domain.

8. The panel of Claim 1, wherein the panel has a conformable panel domain along at least one edge.

9. The panel of Claim 1, wherein the panel domains are bands.

10. The panel of Claim 1, wherein the panel has at least one edge that comprises a tongue or groove profile.

11. The panel of Claim 1, wherein at least one panel domain is a polymeric foam.

12. The panel of Claim 11, wherein each panel domain comprises a polymeric foam.

13. The panel of Claim 11, wherein the foam has an average cell diameter within a range of from 0.01 millimeters to 10 millimeters.

14. The panel of Claim 11, wherein the foam has a density of 5 kilograms per cubic meter or more and less than 100 kilograms per cubic meter.

15. The panel of Claim 11, wherein at least one panel domain has an open cell content of 5 percent or more, according to American Society for Testing and Materials method D2856-A.

16. The panel of Claim 1, wherein at least one panel domain comprises coalesced polymeric foam strands.

17. The panel of Claim 16 wherein the coalesced polymeric foam strands comprise polypropylene.

18. The panel of Claim 16, wherein at least one panel domain comprises coalesced polymeric foam strands having interstrand spaces.

19. The panel of Claim 1, wherein the panel comprises coalesced polypropylene foam strands having an average cell

diameter within a range of from 0.01 millimeters to 10 millimeters, and having a density within a range of from 5 kilograms per cubic meter to 100 kilograms per cubic meter; wherein at least one panel domain has an open cell content of 5 percent or more, according to American society for Testing and Materials method D2856-A.

20. The panel of Claim 11, wherein the foam's average cell diameter is within a range of from 0.1 millimeters to 4 millimeters, the foam's density is within a range of from 5 kilograms per cubic meter to 50 kilograms per cubic meter, and wherein the foam has an open cell content of 50% or greater, according to American society for Testing and Materials method D2856-A.